1: Radcliffe-Brown E-5 (1906-1908)1922
AZ2-Andamans AZ2

501 Canoes of this type are propelled by rowing with short oars, except in shallow water where they are poled. This method of propulsion (rowing as opposed to paddling) was adopted in imitation of the boats with which they have become familiar since the European occupation.

For the small canoe of the Great Andaman five or six species of soft-wooded trees are used, of which three are species of *Sterculia*. A suitable tree is selected near the shore or a creek, and is felled. Care is taken to make it fall in a particular direction. Thus, if the trunk is curved, the convex side of the curve will have to be the bottom of the canoe, and the tree should fall so that this side lies on the ground. Trees are very rarely regular and before beginning the work of cutting the natives have to decide how it should be cut so as to give the best result, i.e., the greatest stability.

396 After the tree is felled the trunk is cut to the requisite length. The 501 inside of the canoe is first roughly hollowed out with the adze, no use being made of fire. The bark is then removed from the outside of the trunk and the two ends are shaped. Finally, the inside is carefully finished with the adze so as to reduce the sides and bottom to the requisite thickness.

Except at the stem and stern, the canoe retains the shape of the tree, only the bark being removed, and the sides and bottom being formed of the alburnum or sap-wood. At the stern a small platform is cut projecting over the water, which serves as a seat for the steersman. At the prow a larger platform is cut, on which the harpooner stands when he is harpooning turtle or fish. Below these two platforms the ends are not cut away squarely but are rounded from side to side. The prow of the canoe is in every case the lower and therefore broader end of the trunk. It is only in this way that a sufficiently large platform can be provided for the harpooner.

The trees used for canoes have a pithy core and there is therefore a small patch in both the prow and the stern which would admit the [237] water. In former times these two places were caulked with bees'-wax. At the present time the natives often nail a piece of tin (part of an old kerosene tin, for example), with some rags beneath it, on the outside of the canoe at these two places.

When the hull of the canoe is finished it is moved to the shore or to the bank of a creek and the outrigger is attached. The float is a straight spar of light wood. In the North Andaman the wood of the *Hibiscus tiliaceus* is often used, but Mr Man says that in the South Andaman the float is always made from a species of *Sterculia* (*mai* in

1: Radcliffe-Brown E-5 (1906-1908)1922
AZ2 Andamans AZ2

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Aka-Bea)[1]. The ends of the float are only roughly shaped. The broader end of the float is forward.

The float is attached to a number of booms, of which there are never less than three in the smallest canoes, while there may be as many as eight or nine in a large canoe. A medium-sized canoe has five or six booms. The boom is a thin straight piece of tough wood, of which one end is sharpened and thrust right through two holes cut in the gunwales of the canoe opposite to one another, the sharpened end projecting for a few inches on the port side of the canoe. The boom thus projects about three feet on the starboard side on the level of the gunwale.

Where the boom passes through the gunwales of the canoe it is bound with cane, and the cane is bound round the whole of that part of the boom that is within the canoe between the two gunwales. (See

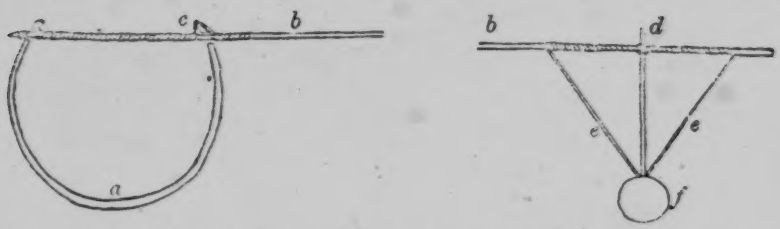

Fig. 44. Transverse section of canoe and outrigger. *a*, hull; *b*, boom; *c*, cane binding over boom; *d*, stick attaching boom to float; *e*, stays of cane; *f*, float

Fig. 44.) This portion of the boom forms a seat for the man paddling the canoe, so that he sits on a level with the gunwale with his feet on the floor of the canoe.

The boom is attached to the float by means of sticks of tough wood. These sticks, having pointed ends, are driven into the float, one perpendicular, and the other two at an angle on each side. The tops of the three sticks are fastened to the boom a few inches from its end by means of a strip of cane. The arrangement of the three sticks is shown in Fig. 45.

The strip of cane with which the sticks are bound to the boom is wound spirally round the boom itself for a few inches and is then carried down round the float and back to the boom again on the other side. The three sticks provide an efficient resistance against a longitudinal thrust (i.e., a thrust in the same direction as the line of the

[1] Man, *op. cit.* p. 397.

1: Radcliffe-Brown E-5 (1906-1908)1922
AZ2 Andamans AZ2

canoe). The strip of cane passing from the boom round the float and back to the boom again provides a resistance against any lateral thrust on the float. The three sticks, being driven in when the wood of the float is dry, do not readily work loose, as the water in which it is constantly immersed keeps the wood swollen. The cane binding, including the stays on each side, may work loose, but can readily be tightened or renewed. Each of the booms is attached to the float in exactly the same way, and the whole arrangement is very efficient in keeping the float rigidly attached to the hull in such a position that it rests on the surface of the water when the hull itself rides freely balanced.

Canoes of this type vary in dimensions within wide limits. A small canoe with only three booms, which would carry three persons, measured 4·85 metres in length over all with a beam of about 35 centimetres. A large canoe may measure as much as 9 metres with a proportionate beam.

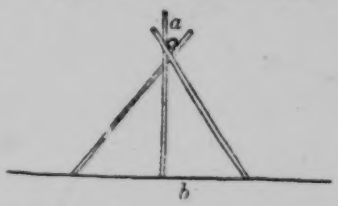

Fig. 45. Showing manner in which the boom (*a*) is connected with the float (*b*).

A well-made canoe will often balance well enough as it stands, but it is sometimes necessary to balance it with ballast of stones or pieces of coral. In any case the canoe is easily overturned in a rough sea unless the occupants can maintain the balance with their bodies. As the canoe is made of light wood it cannot sink even when full of water, and the natives easily right an overturned canoe, bale it out, and get in again, even in a rough sea.

The furniture of a canoe consists of the ballast (of stone), a piece of stone (or sometimes a piece of tin) on which to keep a small fire smouldering, an anchor consisting of a lump of coral or stone attached to a length of rope, a *Nautilus* shell or two for baling out the canoe, a bamboo pole of about 18 feet in length for poling the canoe in shallow water, and paddles.

In the platform overhanging the prow a few holes are cut. These holes are sometimes used to attach the rope by which the canoe is fastened to an anchor. One or more turtle skulls are often attached so as to hang down beneath the platform. In turtle-hunting expeditions on dark nights a torch is slung beneath the forward platform so as to shed its light on the water while the harpooner remains in shadow.

When a canoe is finished it is decorated with designs painted on it with red paint and white clay, particularly on the forward platform and

1: Radcliffe-Brown E-5 (1906-1908)1922
AZ2 Andamans AZ2

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along the gunwale. These designs soon wear off when the canoe is in use and are not renewed.

The paddles used by the Andamanese vary considerably in size and to some extent in shape, but the following description with its accompanying figure gives a fair idea of a typical specimen. The whole paddle has a length of 123·5 centimetres, the shaft being 85 centimetres and the blade 38·5 centimetres. The diameter of the shaft from the blade to the middle is 2·6 centimetres, and from the middle towards the handle end it tapers to a point. The shaft is circular in section throughout its length. The blade is leaf-shaped, pointed bluntly at the apex. In section it is plano-convex, with a maximum thickness of 1·3 centimetres and a width of 8·7 centimetres. Paddles are cut with an adze from the wood of the *Myristica longifolia* and planed with a boar's tusk. They are often ornamented, when new, with painted designs in red and white.

Fig. 46. Paddle

In deep water the canoe is paddled. Each of the occupants sits facing forward. The steersman sits on the stern platform. The others sit on the seats provided by the outrigger booms. Each man paddles on which side he chooses. It rests with the steersman to maintain the canoe in its proper course. In shallow water the canoe is propelled with a pole. A man stands on the forward platform and poles the canoe, steering as he does so. In a fairly large canoe a man at the stern may also take a pole and, standing up, help to propel the canoe.

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All the work connected with the making of canoes and paddles is done by men alone, except the painting, which is usually done by women. It is the men also who make most use of canoes.

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The large canoe, that is now made by all the tribes of the Great Andaman Division, is simply a canoe of the same general shape as the Great Andaman outrigger canoe, cut from a larger tree and without the outrigger. The shape of the hull, with its platforms fore and aft, is exactly the same. It seems that when the natives obtained a plentiful supply of iron tools (after 1858) they began to cut down and hollow out larger trees than formerly. Having made these larger canoes they found that they would, when well cut and ballasted with stone, float quite well without an outrigger. (It may be mentioned that the hull of a small canoe is always tested on the water before the outrigger is attached.) Indeed a well cut canoe of large size floats and balances

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2: Man G-5 (1869-1880)1932 AZ2 Andamans AZ2

themselves in their effort to maintain the credit of their ship, their cutter, and their flag."

2. Nowhere on Great Andaman, at all events at the present day, have any aborigines been found capable of propelling a canoe at more than half the speed of one of the ordinary gigs in common use at Port Blair; moreover, in respect to the extreme buoyancy of their skiffs, but little κύδος seems due to the Andamanese boat-builder, for having had, until quite lately, no other implement than a rude, though tolerably effective, adze with which to form them, he was compelled to select for his purpose the lightest and softest woods that were procurable. At the same time there is no doubt that if they possessed the requisite knowledge, and the means were available for constructing stronger and more seaworthy craft, they would lose no time in employing them; for they fully recognise the inferiority of their boats, both in regard to workmanship and speed, to those used by Europeans, or by their neighbours the Nicobarese. In one respect only do they consider that their own canoes surpass all others, and that is in the projecting prow, which enables them to spear fish and turtle with more ease than is possible in boats of a different construction.[1]

3. The current tradition[2] of the escape of four persons in a boat when the world was submerged, may be fairly considered as affording some evidence that this mode of transit is not regarded as of recent introduction.

4. Many conflicting opinions have been expressed by different writers under this head, and the form of canoe originally manufactured by the Andamanese has been much discussed. They themselves declare that the outrigger (*châ·rigma-*) was adopted immediately after the Deluge, in consequence of the deterioration of a species of *Pandanus* tree, called *mâng-*,[3] of which, prior to that catastrophe, they had been able to make large plain "dug-outs." Until recently[4] the outrigger continued

[1] In the South Kensington Museum there are models of canoes made by the natives of the Andamans and Nicobars, which will give to any interested in the subject a fair idea of their relative merits, as well as of the skill of their respective makers; and it may be added that in the entrance court of the India Museum (South Kensington) a specimen of a fair-sized Andamanese canoe is now to be seen minus its outrigger.

[2] *Vide* "Mythology," paragraph 16.

[3] *Vide* "List of Trees," Appendix L.

[4] The following information was obtained from an Andamanese chief:—"We have used outrigger canoes from time immemorial. It is in recent times that we have commenced making the large plain canoes, and this we were induced to do from the facility with which we have been able to obtain iron. Owing to their large size they do not require outriggers. When the sea is rough we prefer these large dug-outs and the small outrigger canoes when it is calm; the latter are more easily made, but do not last many months when in constant use, whereas the former will serve for a year or more."

10: Sen K-3, 4 (ca. 1955) 1962 AZ2 Andamans AZ2
Onge

621 rather than order is given by the leader. Cipriani observes.[1] "For
622 instance, it is very amusing for them to think that a man gives orders to others. This means that they have no real chiefs. A so-called Onge
[592] chief, or raja, is only the head of a group of families living in the same communal hut, and giving not orders but only advice. It is the most experienced man who is considered chief in the hut, but his authority if at all never goes beyond that hut. In other words no real chief exists in the Little Andaman. Notwithstanding this, there is a perfect order in the island, because nobody interferes with the work or encroches upon what can be considered the rights of others."

124 As is common to most of the aborigines, the Onges are generally
162 not very receptive when the questions about their numbers and other groups are enquired. The headman says that there are many many fifty Onges. However the number of the Onges are approximately 600.

22 As regards the mode of living of the Onges, the hunting and collec-
231 ting are the basis of their economy. The domestication of the plants
241 i.e. art of agriculture is not known to them and it is only 30 years back, the dogs arrived in the island and have been domesticated by the Onges for chasing the pigs, their main prey. In the absence of agriculture, the natural products of the sea and the forest provide them with all
[262] their items of diet. Animal and vegetable products and honey are the main items of their diet and there has been, so far, no introduction of salt in their diet. The most important victims of their hunting are pigs and turtles, the former is chased by dogs and are killed with great
252 cruelty. The cooking of the fish, meat, roots, tubers, jackfruits etc are
251 done by putting them under fire. Preservation of foodstuffs is not widely practised except the jackfruit seeds which are tied up in a small net inside water on the bank of some stream and taken out during rainy season, when the other vegetable foodstuffs are not available. On
146 the whole, the Onges have a very balanced diet with a fair richness of all the nutrients. In this connection the observations of Dr. Cipriani during his survey in the Little Andaman throws considerable light in
[157] their conditions of life. He has estimated the Onges as one of the happiest people of the world, who in spite of their primitive economy, are not the miserable victims of poor health, ill nutrition and oddities of life.

396 Some amount of artistry and craftsmanship have developed among these people. A canoe can be constructed by a man, all by himself from

[113] 1 Cipriani, L—Survey of Little Andaman during 1954; Bul. Dept. Anth.,

10: Sen K-3, 4 (ca. 1955) 1962 AZ2 Andamans AZ2
Onge

the felling of the tree, chiselling the lumber and processing it further to give the shape of a canoe. Buckets of wood are also constructed by them from the softwood tree. Two types of baskets are made, the smaller ones are more well-finished than the bigger ones. The former is known as *tolcoaga* and the later *tole-laya*. Such activities have introduced the use of dahs, chisels, and iron files among the Onges, from the iron pieces derived from the sea shores. The other important pieces of their craftsmanship are the beautiful weavings of fibre, tussel of yellow fibre used by the women in their front. However, the art of making the earthen pots has been completely forgotten.

The leisure in their lives has helped the development of some amount of aesthetic senses among the Onges. All the Onges men and women shave their heads with flakes of glass, obtained from the sea-borne glass bottles. The body of the Onges are also painted with white clay which save their skin from insect-bite while red paint serves medicinal purposes if some individual is having fever. In times of mourning, red orchre paint is a taboo.[1]

Early marriage is the custom. The widows are looked down upon by the society. Some incidents of widow murder and drowning are heard. In the married life, the husband is devoted to his wife and both the husband and wife work for collecting their food.

Dances and songs are in vogue and there are practically songs for every occasion and activity. Most of their songs are more plaintive than joyous.

There are three broad divisions of the Onges of the Little Andaman :

(1) *Giremeka-Gobeule* group inhabiting the northeastern coast of the island ;

(2) *Engakwale group* live in the interior of the islands ; and

(3) *Gireraragobeule group* live in the southern and western coasts of the islands.

In spite of all the limitations, the Onges have been considered as one of the happiest people of the world with plenty of food and water to eat and drink and with very few social cankers to fight with. But as is common to all other aborigines of the Andamans, a decline in their number is discernible.

The Sentinelese

The Sentinelese are the least known of all the aborigines of the Anda-

1 The Onge of the Little Andaman—A short guide book ; Anthropological Gallery, Indian Museum, Calcutta.

11: Cipriani E-3 (1951-1955) 1966 AZ2 Andamans AZ2

taste. The liquid content of these stems is so great that it makes them extremely heavy to carry. These lianas are very common all over the islands and anyone who knows them need never die of thirst. To get at the liquid one only has to break the stem and put it to one's mouth; if one puts a receptacle under the break, a litre or so of liquid can be obtained in a matter of minutes. When the first strangers came to the archipelago, the Andamanese watched them tear down parts of the forest, including these lianas, and tried in vain to protest at the vandalism. No one understood their protests, but they were right.

The forest abounds in trees whose fruits in season form an important source of food for the islanders. One is the so-called jackfruit, *Artocarpus communis*, which here grows wild, though various species are cultivated all over Asia. The fruits, which appear on the thickest branches as well as on the trunk, are smaller in the wild variety, rarely weighing more than thirty grams, but the yield is enormous and the islanders enjoy them for months, especially from March to May. The Onges call them *bulundanghe*, and roast them in hot ashes till the hard pulp and seeds are eatable; the latter, the size of a hazelnut but tougher, are the best part.

Another useful plant is the *Pandanus*, or screw-pine. On Little Andaman extensive areas are covered with nothing else, making progress very difficult owing to the twisting roots and the spines on the long, tough leaves. It seems to prefer the coastal areas, particularly the marshes, where it often grows into an impenetrable jungle. There are at least two species, one of which is gregarious. The other, which grows as isolated specimens, is longer leaved, with bigger fruits and stems like candelabra, standing up on an arch of roots, as though on stilts. With the leaves of this variety, fluted and easy to arrange like roof tiles, the Onges can quickly improvise a waterproof covering. The young leaves provide them with ornaments which they wear for their dances, while the pulp of the fruit, which looks rather like a pineapple, perfumed and delicately flavoured, is nutritious though somewhat stringy.

Along the coasts where there are no *Pandanus*, one very often sees something very different – mangroves. The islanders use the wood for their canoe floats, and for fixing pegs (see p. 122) and the supply is unlimited, as the growth and spread of the mangroves are assured by a number of factors which have made them one of the best

11: Cipriani E-3 (1951-1955) 1966 AZ2 Andamans AZ2

They have neither incantations, amulets nor prop. signs to help them. Even the *marque de chasse* found on their arrow heads had no major significance; in all probability they merely served to indicate the best arrow and at most they served as a warning to the womenfolk not to touch them (it is interesting that I never saw any woman or child with a bow or an arrow). But this is as far as they go towards superstition, and its only effect is to enhance the division of duties between the sexes.

The Onges, unlike the Jarawas and Arioto, have never lost the art of canoe making, and the building of a new canoe is an important matter. The selected tree, always one of the three species of *Sterculia*, is felled and then hollowed out slowly and laboriously with a rudimentary form of hatchet, the work often being done by one man alone. The weight of the felled trunk makes it necessary for the work to be done where it falls, but after much patient whittling away the resulting canoe is extremely light, with thin walls, though still not light enough to be carried to the water, never far away. A series of short logs are used as rollers in the age-old way and the builder's friends all gather to help clear a way through the undergrowth and prepare the rollers. Only a few are needed; all is soon ready and the Onges watch delightedly as the canoe glides away down to the shore. These canoe-ways often provided me with an easy path to the sea if I came upon them in the forest. Sometimes they led not to shore but to one of the many creeks, where salt water and marine fauna penetrate miles inland and make it easy for the Onges to launch their canoes from a point far from the sea.

The Onge canoe, hollowed out in one piece, is a survival of the ancient canoes of the Neolithic age, found in Switzerland and elsewhere in Europe. It survives in the Andamans, and through Oceania to the Americas, in northern Asia (notably among the Ainu) in south-west Asia, and even in south-east Africa.

The canoe has no distinction between bow and stern, and is commonly navigated from either. At each end of the canoe a crude platform juts out, on which the harpoon throwers stand. Very careful attention is paid to the float, which is fragile, and is therefore kept on the lee side. The object of it is to prevent the canoe from capsizing, which it is otherwise very liable to do owing to its round keel, always left in the natural shape of the tree-trunk. I had some experiences of rough seas in one of these canoes

11: Cipriani E-3 (1951-1955) 1966 AZ2 Andamans AZ2

type of canoe is the only craft seen. I saw some hauled up on the beach, identical with the ones I had seen the Onges building, even to the *Nautilus* shell as a baler. In face of this and other evidence there can be little doubt that the people of North Sentinel are descended from the Onges, possibly driven off course by some storm, and then isolated on the island.

The Arioto, copying Indian and Burmese craft, have in recent times come to modify the original canoe somewhat, deepening the gunwales and doing away with the float. The result is a craft which though it remains small is unlikely to fill with water in heavy seas. But even the Arioto prefer the single outrigger canoe for sea voyages.

The only real seafarers, however, are the Onges, who make regular hunting trips as far as Rutland. In the past they sometimes made devastating raids as far as Car, but these have died out over the past hundred years as their numbers have dwindled. There is certainly no doubt that at one time the Onges undertook considerable sea voyages in canoes the same as they build today.

The work involved in the building of these canoes is, as I have said, enormous. The preparatory work on the tree, and then the felling, are hard enough without proper equipment. I gave my Onge friends some long-handled wood-cutter's axes, to help in this part of the work. In their enthusiasm they chopped so hard they soon broke the handles and chipped some of the tempered blades, so that I had to take them to Port Blair for repair! But the real work begins with the working of the felled trunk. Then a small and very crude form of hatchet[1] has to be used, flaking off small strips like a plane; fire is never used to assist in the process. Fortunately the *Sterculia* wood usually chosen is soft.

The original shape is not touched after the required length, calculated so as to allow for the harpoon-thrower's platform at each end, has been cut. The irregularities of the trunk are left intact, so that the canoes look distorted and even ugly despite their seaworthiness. During the preliminary stage of stripping the bark great care is taken not to chip the outer ring of wood immediately below the bark; this is smooth and fine-grained, and more waterproof than the inner layers. One danger is that as the wood dries

[1] The blades used to be made from *Tridacna* shell, but in more recent times they have come to be made of iron from wrecked ships cast up on the beaches.

One danger is that as the wood dries
396 out small cracks will open up and let water through the end of the
[314] canoe; these the Onges stop with resin.

Then comes the decision which side of the trunk is to be the keel. Once this has been decided, the upper surface is chipped flat and the hollowing out of the centre section begins, leaving the flat platform at each end. The finished shell is often no more than three centimetres in thickness, increasing slightly under the end platforms to protect the ends of the canoe as they grate on the reefs.

The float and booms, which project considerably, are for obvious reasons attached after the canoe has been rolled to the water. The
[824] booms are made of heavy hard wood, but the float itself, made of *Hibiscus tiliacus* or *Sterculia villosa*, has to be not only light, so as to float, but soft, so that the fixing pegs can be driven in easily. These are set into the float in a series of triangles, held in securely by the expansion of the wet wood and the upward force of the sea. The free ends of the pegs are then lashed together in groups of three so that each triangular set becomes a pyramid. The outrigger booms are set parallel to each other; each runs right across the hull, firmly lashed into holes bored on each side of the canoe high in the gunwales, and extends at least three metres out on one side. The apex of each pyramid formed by the float pegs is lashed up to one of the booms, holding the float fast to the booms above it.

The canoes have no reinforcing ribs either inside or out, and because of their inherent fragility they are never left in the water; they are dragged up over specially cleared runways to the communal huts near the shore. There they are left lying in the sun among the Ipomeas.

[314] The direct heat dries them so rapidly that the wood invariably develops cracks, and the Onges resort patiently to their invariable remedy; resin is smeared over the cracks inside and out, and reinforced by a network of fibres laid on top, with a further layer of resin to seal them over.

[737] Once on shore the canoes are left lying till they are next wanted, but with everything ready; the invaluable *Nautilus* is ready to bale out, so too are the point, cord and shaft of the harpoon, the large flat stones on which fire is carried without damaging the craft, and the blocks of wood to knock the harpoons out of the turtle shells.